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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Before the
Federal Communications Commission
Washington, D.C. 20554

In the matter of:	)	
	)	
Preparation for International	)	ET Docket 93-198
Telecommunication Union World	)	
Radiocommunication Conferences	)	

To: The Commission

COMMENTS OF CD RADIO

SATELLITE CD RADIO, INC.

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Summary

Satellite CD Radio, Inc. (CD Radio) hereby comments on the Commission's *Notice of Inquiry* on upcoming World Radiocommunication Conferences (WRC). As an applicant for licensing as a provider of satellite digital audio radio services (DARS), CD Radio focuses exclusively on such issues. CD Radio offers the following suggestions as the United States begins preparing for the first conference, scheduled for November of this year.

First, the U.S. should not place DARS spectrum allocations on the agenda for any future conferences. The United States achieved great success in confirming its planned S-Band satellite DARS allocation at WARC-92; with the impetus for L-Band DARS sputtering worldwide, the U.S. has nothing to gain by fighting this battle yet again. Indeed, if anything, the rationale for the S-Band allocation has become even more compelling in the intervening year. As a result, the U.S. should also oppose

keep the topic off the WRC agenda, but immediately to advance publish "generic" S-Band satellite DARS systems covering all the U.S. applicants.

Finally, the United States need not be bound by RES 528 to preserve a portion of the S-Band satellite DARS spectrum for the future. The resolution was crafted for L-Band DARS, and has little relevance where no developing nations in Region 2 have S-Band allocations or where the United States has already made the policy decision to move the few existing terrestrial S-Band licensees. Protection for S-Band terrestrial systems in neighboring nations will be obtained through the bilateral coordination process, not through cumbersome multilateral radio conferences.

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Satellite CD Radio, Inc. (CD Radio), by its attorneys, hereby comments on the Commission's *Notice of Inquiry* in the above-captioned docket.[1] In these comments, CD Radio discusses only issues related to allocations for the Broadcasting-satellite Service (sound), which is known as satellite digital audio radio (DAR) in the United States. CD Radio submits that the United States should not place satellite DARS allocations on the agenda for the upcoming World Radiocommunication Conferences (WRC) in 1995 or 1997. Moreover, the United States need not follow the so-called "upper 25 MHz rule" in its satellite DARS allocation at S-band. Finally, CD Radio notes that the plans for coordination with neighboring countries for satellite DARS allocations are already underway, and should be successful.

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[1] Preparation for ITU World Radiocommunication Conferences, FCC 93-328 (June 28, 1993) ("*Notice of Inquiry*").

I. INTRODUCTION AND STATEMENT OF INTEREST

Over three years ago, CD Radio filed to construct, launch and operate the nation's first satellite DARS service.[2] At the same time, CD Radio petitioned the Commission to allocate spectrum for the service,[3] and CD Radio subsequently requested a preference as a pioneer of the new service.[4] The Commission accepted CD Radio's application[5] and its pioneer's preference request[6] for filing, and launched a *Notice of Inquiry* on DAR.[7]

During this period, in a parallel process, the United States began preparing for the 1992 World Administrative Radio Conference (WARC), which was poised to allocate spectrum for satellite DARS. After significant effort, including discussions within the U.S. government and private sector-governmental negotiations, the Commission and the Executive Branch -- with the help of CD Radio -- found a spectral home for satellite DARS at S-Band.[8] The U.S. took this position to WARC-92 --

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[2] Application of CD Radio, File No. 49/50-DSS-P/L-90 (filed May 18, 1990).

[3] Petition for Rulemaking of Satellite CD Radio, Inc., RM-7400 (filed May 18, 1990).

[4] Request for Pioneer's Preference, PP-24 (filed July 30, 1991); Supplement to Request for Pioneer's Preference, PP-24 (filed Jan. 23, 1992); Supplement to Pioneer's Preference Request, PP-24

despite opposition from several other countries -- and secured the right to use the S-Band for satellite DARS.[9]

With an international allocation in hand, the Commission began the process of implementing satellite DARS in the U.S. The agency proposed to allocate the S-Band spectrum for satellite DARS,[10] invited other interested entities to file satellite DARS applications,[11] and announced a "cut-off" for pioneer's preference requests.[12] At present, with the pleading cycle on the rulemaking and the applications completed, CD Radio and three other entities are awaiting the FCC's final order allocating spectrum and beginning the licensing process.

Now, the Commission has released a *Notice of Inquiry* seeking advice on various positions in preparation for a series of upcoming ITU conferences. In general, CD Radio suggests that the U.S. stand on its success at WARC-92 and not seek further DARS spectrum allocations. This is particularly true since the U.S., through participation in the CCIR (now renamed the Radiocommunication Sector), has begun to establish specific protection criteria for coordinating S-Band satellite DARS with neighboring co-frequency terrestrial users. Finally, because it is simply inapplicable to

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[9] Final Acts of the World Administrative Radio Conference at 65 (Malaga-Torremolinos 1992) (ADD 750B) ("Final Acts of WARC-92").

[10] Digital Audio Radio Services, 7 F.C.C. Rcd 7776 (1992) (Notice of Proposed Rule Making and Further Notice of Inquiry). This *Notice* also included a further *Notice of Inquiry* seeking information about terrestrial digital radio.

[11] *See* Public Notice, *supra* note 5, at 2.

[12] Public Notice Report No. DA 93-508 (May 3, 1993).

the S-Band allocation, the Commission need not implement the full ramifications of Resolution 528 -- the upper 25 MHz rule -- in the United States.

II. DISCUSSION

A. Spectrum Allocations

Simply put, the United States need not, and should not, place spectrum allocations for satellite DARS on the agenda for upcoming WRCs. The United States need not seek further allocations because it was wholly successful at WARC-92 in obtaining 50 MHz at S-Band for domestic needs. U.S. satellite DAR applicants have applied, and will be able, to use this spectrum without further modifications to the international table of allocations.

The U.S. should resist efforts by other Administrations to place a comprehensive reexamination of the satellite DAR spectrum on the agenda of future WRCs for four reasons. First, since U.S. policy and technical requirements were firmly fixed in supporting S-Band DAR;[13] little purpose would be served in further discussion.[14] Second, despite the precatory language in RES 528 about a worldwide allocation, this is not essential -- 90 percent of the cost of DAR receivers will be the

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[13] *See Digital Audio Radio Services*, 7 F.C.C. Rcd at 7776.

[14] Indeed, since WARC-92, NTIA has conducted further detailed technical studies that confirm the difficulty of sharing between L-Band aeronautical telemetry on the one hand and other terrestrial and space services on the other. *See* Coordination Thresholds and Techniques, USWG 8B-26 (draft June 23, 1993).

"non-RF" portion, making it feasible to interchange most of the units' subsystems.[15] A global allocation would offer few additional benefits. Third, the increasing likelihood of in-band, on-channel (IBOC) terrestrial digital radio has raised questions about the desirability of the L-Band allocation outside the U.S. where satellite and terrestrial systems were to be combined; spectrum requirements therefore remain unknown. Finally, the most probable scenario is that other countries may wish to switch to S-Band, as L-Band appears less and less desirable.[16] The U.S. would be better positioned to let those countries seeking change formulate the agenda and persuade the conferees.[17]

Just as the HDTV standard offered by Japan and selected in Europe was superseded by advances in the U.S., the entire premise of international L-Band DAR has been overtaken by superior satellite technologies and IBOC in the United States. Ultimately, some other countries likely will move their satellite-only systems to S-Band. But, the U.S. allocation as currently listed in the international table will provide the necessary framework for the growth of domestic DAR. Given this, the U.S. would be best served by leaving the DAR allocation alone for the foreseeable future.

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[15] Further, less than global DAB allocations will not disadvantage U.S. manufacturers, who already lead the world in L- and S-Band technology and will be well poised to sell equipment for either market.

[16] *See, e.g.*, World Evaluates German DAB Decision, RADIO WORLD, June 23, 1993, at 8 (discussing German decision to delay commitment to L-Band Eureka-147 system and Mexican determination to "re-evaluat[e] its previously planned use of Eureka").

[17] As noted below, the U.S. should not oppose the scheduling of a conference to plan L-Band DARS frequencies and slots.

B. Coordination and Protection Criteria

In the *Notice of Inquiry*, the agency asks parties to "address BSS (sound) coordination vis-a-vis existing terrestrial operations."[18] The Commission accurately notes that "coordination with some existing terrestrial operations will be necessary, such as Canadian and Mexican terrestrial operations along our borders."[19] The FCC apparently seeks advice on whether satellite DAR/terrestrial operations coordination issues should be placed on the forthcoming WRC agenda.

As with spectrum allocations, CD Radio recommends that the U.S. not raise

terrestrial systems.[20] Similar analysis is appropriate in order to accomplish coordination with Mexico. This process would protect existing terrestrial systems and permit U.S. DAR providers to offer an excellent quality of service. Thus far, no entity -- domestic or international -- has provided any substantive criticism of these procedures.

In sum, in a multilateral context, the United States has already submitted its proposal for the required coordination criteria for S-Band satellite DARS with terrestrial receiving facilities in adjacent Administrations. Ultimately, these issues will be resolved in the context of a particular coordination, and WRC-95 or -97 could only engender further delay. This is especially true since the CCIR has not yet finished its technical analyses and, outside the United States, no entity has submitted a concrete service proposal for L-Band satellite DARS,[21] making coordination issues -- at this juncture -- quite hypothetical.

Indeed, rather than broaching the issue at WRC, U.S. interests would best be served through immediate advance publication of "generic" DAR satellite systems covering the relevant S-Band spectrum and orbital arc sought by the DAR applicants.

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[20] **Example of Service Requirements and System Characteristics for United States Domestic Satellite Digital Audio Broadcasting (DAB) at 2310-2360 MHz, CCIR Document 10-11S/88-E, att. 1 (Jan 5, 1993), *submitted as appendix to* Technical Annex of Comments of Satellite CD Radio, Inc., Gen. Docket No. 90-357 (Jan. 29, 1993).**

[21] **Indeed, throughout much of Europe and many other countries, the L-Band broadcasting satellite allocation does not even become effective on a primary basis until 2007. *See* Final Acts of WARC-92 at 46 (ADD 722B).**

In this way, rather than through upcoming WRCs, the United States can speed the process of DAR coordination.

C. Full Use of the DAR Band in the United States

In the *Notice of Inquiry,* the Commission notes that Resolution 528 may address the question of whether portions of the satellite DAR band must be reserved, pending a future planning conference.[22] However, the agency goes on to note that "international planning for BSS (sound) does not appear to be necessary" in the United States, given the fact that other Western Hemisphere nations are not proposing to use S-Band.[23] In fact, the Commission is exactly correct, and the United States may allocate and coordinate the entire band immediately without awaiting further WRC action.

As the Commission will recall, allocations for BSS-Sound were among the most contentious issues at WARC-92.[24] The United States stood in the minority in recommending an allocation at 2.3 GHz: the majority of countries sought allocations at L-Band (1.5 GHz), with a strong minority (including much of Europe), seeking spectrum above 2.5 GHz. Both the 1.5 GHz and 2.5 GHz bands, however, were already extensively used by terrestrial stations and/or aeronautical telemetry, further

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[22] *Notice of Inquiry,* ¶ 9. *See* Final Acts of WARC-92 at 239 (RES 528 at resolves 3).

[23] *Id.*, ¶ 10.

[24] United States Delegation Report, World Administrative Radio Conference at 29 (Malaga-Torremolinos 1992).

complicating any universal allocation.[25] Moreover, there was a strong undercurrent of discontent by developing countries concerned about making *any* allocations that could be filled by the developed world before developing nations had the opportunity to launch their own BSS-Sound systems.[26]

At the last minute, the Conference compromised. A multi-regional allocation was made at 1.5 GHz,[27] with a regional allocation at 2.5 GHz for those countries (principally in Asia) that could not implement at L-Band.[28] The United States -- which could not implement BSS-Sound at either 1.5 GHz or 2.5 GHz -- obtained the right to use 2.3 GHz instead.[29]

In conjunction with this compromise, the Conference adopted Resolution 528. That resolution notes the need for "equitable" access to the frequencies and the

countries may have access to BSS-Sound spectrum.[30] In the interim period before the conference is convened, the Resolution suggests that BSS-Sound systems be limited to the "upper 25 MHz of the appropriate band."[31]

The upper 25 MHz policy thus had two purposes. First, it provided a "safe harbor" for existing terrestrial stations over the medium term. In other words, it established an orderly transition for moving terrestrial services out of the affected band. Second, it ensured that not all BSS-Sound orbital slots and frequencies could be used by developed countries before the planning conference reserved space for developing countries. At least half the BSS-Sound frequencies, therefore, could be available into the next century.

The BSS-Sound allocation in the United States, at 2.3 GHz, covers only a single country -- the United States -- in Region 2. As a result, neither of the twin purposes of the "upper 25 MHz" rule would be served by its application here. First, the need for protection of terrestrial stations was tied to the crowded L-Band, not the relatively sparsely used S-Band. The United States has virtually no existing stations in the band that require any transition period. In any case, however, the FCC has announced its intent to move those facilities to the 2360-2390 MHz portion of the band.[32]

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[30] *Id.* at 239 (RES 528 at resolves 1). The developing world insisted on a similar planning regime for BSS-Video, and the planning conferences reserved orbital access for developing world direct broadcast satellite service.

[31] *Id.* at 240 (RES 528 at resolves 3).

[32] *Digital Audio Radio Services*, 7 F.C.C. Rcd at 7779.

Second, no lesser developed countries need frequencies or slots reserved at 2.3 GHz because their allocations are at 1.5 GHz. Put differently, the upcoming BSS-Sound planning conference is not expected to "plan" anything at 2.3 GHz. As a result, the United States need not artificially restrict use of 2310-2335 MHz before the planning conference. At the same time, however, the U.S. should not oppose efforts of other Administrations for scheduling of a conference to plan L-Band DAR frequencies and slots.

This conclusion is not altered by the necessity of U.S. coordination at S-Band with adjacent countries, including Canada and Mexico. Both of those nations had planned to implement DAR in L-Band. CD Radio has already shown, however, that

III. CONCLUSION

The Commission should ensure that the United States remains at the forefront of technological leadership, including in digital audio radio. The FCC can best accomplish this through speedy advance publication of satellite DARS systems, and beginning to prepare for coordination of the entire 50 MHz allocation with our neighbors on a bilateral basis. Especially because a global DARS allocation is both impossible and unnecessary, no useful purpose would be served by further multilateral discussion at upcoming World Radiocommunication Conferences.

Respectfully submitted,

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July 19, 1993

CERTIFICATE OF SERVICE

I hereby certify that on this 19th day of July, 1993, I caused copies of the foregoing "Comments of CD Radio" to be mailed via first-class postage prepaid mail to the following individuals on the attached list.

Carolyn A. Fonner

*Via hand delivery.